THE VETERINARY RECORD

A Weekly Journal for the Profession.

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THE BOARD OF AGRICULTURE.

A gentleman who professes to know more than can be gathered from mere public observation expostulates with us on the tone of our last two notes on this question. He objects to our assumption that any disregard of the veterinary element on the Board is probable, or that ordinary justice will not be done to Messrs. Cope and Duguid on the retirement of Professor Brown. We are glad to hear this, but it is nevertheless remarkable that within a few days of Professor Brown's retiring no official announcement of his successor is made. Perhaps it would have been more correct to have waited with simple faith for the authorities to have made the promotion which seniority, experience, and special intelligence all suggest. Perhaps it is clear to every one interested in the contagious diseases of animals that next to Professor Brown the claims of Inspectors Cope and Duguid are greater than those of any English veterinarians.

We confess to grave doubts on these points; and cannot forget that the veterinary element, which is the most indispensable section of the Board of Agriculture, is the worst paid and apparently the least valued. Any further slight to our confrères on the Board would be a slight to the profession, and although we are numerically weak and politically insignificant we are quite able to make our power felt on the subject of cattle diseases. Only a few days since the Board of Agriculture in a letter acknowledged the necessity of co-operation on the part of agriculturists to ensure the success of the swine-fever regulations. We have never seen any similar acknowledgement of the services of the veterinarian. Those who know anything of the extermination of pleuro-pneumonia know that our profession deserves credit, not only for the intelligent efforts of the departmental Veterinary Staff, but for the loyal co-operation and assistance given by the private practitioner. "Give and take" is a good rule of life, but no individual or body is satisfied to always give. We desire honest recognition and fair treatment from all authorities, and failing this we must make a collective effort to obtain it. A more active interest in both local and general politics and a distinct refusal to pull the chestnuts out of the fire for others might be a ready means of showing that veterinarians have rights which cannot be neglected with impunity.

THE BLAKE FUND.

There is much force in the adage which says "he gives twice who gives quickly" and those gentlemen who have not yet forwarded their intended subscription to the treasurer should not delay. Mr. Martin does not desire to close the fund too quickly, but it is just one of those affairs in which time does little save blunt the memory. It is no doubt gratifying to Mr. Blake to know that he has the sympathies of his profession and that we all speak kind words of him, but "soft words butter no parsnips" and the bill of costs will not be reduced by any sentiments. The Hon. Treasurer's address is—Mr. Martin, 60 High Street, Rochester, Kent.

"THE VETERINARIAN."

The oldest of our veterinary periodicals is about to be rejuvenated and will, from January next be conducted by Prof. Macqueen. For over three score years has *The Veterinarian* chronicled the advance of our science and art, and no one can write a history of the profession without drawing upon its store of facts. Since 1828 this journal has been the receptacle of most of the facts and observations recorded by practitioners, and it has been always guided by one of the leading men of his day. Youatt, Percival, Morton, Simonds, have been its conductors. Amongst its contributors no name of any leading veterinarian has been wanting for three generations. We feel convinced that Professor Macqueen will carry it on with the energy and intelligence he puts into all his work.

P. D. COGHILL.

By the death of Mr. Coghill a number of us lose a personal friend, and the profession loses perhaps the most expert manipulator who ever had charge of a bacteriological laboratory. Mr. Coghill was not a veterinarian nor did he hold any medical degree. He was curator of the museum at the Royal Veterinary College and was assistant to Professor McFadyean in his capacity of teacher of pathology. The students of the College will sadly miss Mr. Coghill who was always ready to help every one, not only by advice but by cutting and mounting sections of any pathological specimen taken to him. He possessed a rugged independence and a fearless honesty which was best appreciated by those who knew him most intimately.

At the commencement of his fatal illness it was only supposed that he suffered from influenza, but erysipelas supervened. He leaves a widow and two children who will have the heartfelt sympathies of all in their irreparable loss—a loss which seems the sadder from its contrast with the surrounding gaiety of the season.

CASES AND ARTICLES

CASTRATION STANDING v. CASTRATION UNDER CHLOROFORM.

By Thos. M. M'Connell, Wigtown, N.B.

When writing the short article on the above subject for *The Record* of September 30th, I did so with the purpose of trying to induce my *confrères* to adopt the most humane method of proceeding in what must be admitted is one of the most painful operatjons we, as veterinarians, have to perform. I stated shortly and very moderately the advantage gained by operating under chloroform over the standing operation, and, as far as that goes, over any other mode of operating whatever. I expected fair criticism and at least a modicum of argument against my views, but in this I have been disappointed. Instead, my article has received from some young and some nameless members of the profession plenty of sarcastic ridicule and vituperative abuse; yet one thing I am proud of—it has afforded them ample opportunity of blowing their own trumpets, and of this I think they have taken fair advantage. True, we have had one or two good dissertations on the haltering and handling of colts which, no doubt, would have been excellent contributions to *The Horsebreaker's Gazette*, but were entirely unsuited to the pages of a scientific paper like *The Record*.

The sum total of the advantages claimed by all the advocates of the standing operation is that it saves time and can be done with fewer hands; on every other point they contradict each other, and as I had, in the article referred to, conceded these two points, I claim that not one of my arguments in favour of the use of chloroform has been met. I do so even in the face of "Juvenis" and "Country Vet"—to both of whom evidently by the tenor of their remarks I am well known—and who both assert they can perform the astounding operation of ligaturing the spermatic artery with the colt on his feet—for that is what I understand by "castrating by ligature"—and the latter that he can safely perform the still more astounding operation of castrating a colt suffering from inguinal hernia in a similar position (!!!!) Pity, is is not, that two such transcendent lights of the profession should be hid under the bushel of a *nom de plume*, and that the profession should thus be debarred from rendering honor to whom honor is due.

I was sorry to observe that latterly the discussion degenerated into "Castration standing *versus* Castration lying," and that chloroform was completely ignored; for whilst I admit the standing operator can bring forward two arguments against the use of chloroform, I contend the casting operator can bring absolutely none. In the latter case the same hands or even more are required, and the ease and speed with which the animal is secured and castrated *after* being chloroformed renders the loss of time infinitesimal. Mr. Kernohan says he has castrated 24 colts in one afternoon, collected at two places, and asks the question "how long would it have taken me to do these had I resorted to chloroform?" I answer, if the places were not too far apart, just the same afternoon, Mr. Kernohan. Mr. Hoare who approves of casting also approves of chloroform for horses two years old and upwards, but disapproves of it for yearlings, on the curious and surely inadequate ground that they suffer less pain. How much less? I should like to know.

But my principal object in writing now is to point out a curious feature in the discussion which has taken place on this subject. The only correspondent who entirely agrees with me as to the advantage derived from chloroform is Mr. Woodroffe Hill, whom I may call an old practitioner and one of great experience. With the exception of Mr. J. Brown, who graduated seven years ago and who, it is evident by his contribution, has had absolutely no practical experience of chloroform, the whole of the other correspondents who decry its use have graduated only a little over or less than three years ago. What then is the natural deduction from this state of matters? Simply that at our Colleges the administration of chloroform is not practically taught as it should be; that, in fact, the subject remains much *in statu quo* as in our own college days. I remember whilst at College I only saw one animal (a donkey) chloroformed, and although I have seen many hundreds of animals put under its influence since, I am happy to say that was the only animal I ever saw die accidentally from the effects of the drug.

Surely it is high time that at our Colleges no painful operation should ever be performed without the use of an anæsthetic. The danger attendant on the use of chloroform is much, and I fear purposely, over rated. What can be thought of a Professor who is retained by the R.S.P.C.A. in all their important prosecutions, who when a teacher taught the students not to use chloroform, and who as late as the meeting of the N.V.A. last year at Glasgow publicly spoke against its use. Surely there is a big anomaly here. If carefully administered to the horse I do not believe the fatalities from chloroform would greatly exceed those in the human, which, if I mistake not, are put at the rate of one in 10,000. Can the administration by means of the close chloroform muzzle, instead of by the towel as in the human, have anything to do with the accidents we read of? I fear it has.

REMARKABLE LIVER.

There has been so much said recently about the veracity of the members of the veterinary profession that I hesitated to send you the following.

Having occasion to attend at the knacker's yard last week I came across an enormous specimen of diseased liver. The organ was one mass of hydatid cysts varying in size from a pea to a large orange. So completely was the normal liver structure absorbed that a casual observer might be excused for being unable to recognise the specimen. There was scarcely a handful of normal liver left.

The dimensions were: length, thirty-eight inches; breadth, twenty tapering to twelve inches; thickness, nine to about six inches at the narrower end; weight

just over one hundred and twelve pounds. Many of the cysts had been intentionally or accidentally broken or cut, had they been all intact the weight would have been considerably more. I was unfortunately unable to get a history, but the chances are that no such condition was suspected.

COUNTRY.

VETERINARY SOCIETIES.

THE CENTRAL VETERINARY MEDICAL SOCIETY.

An ordinary general meeting of this Society was held on Thursday night, the 7th inst. at the Royal College of Veterinary Surgeons, 10 Red Lion Square, Holborn. Mr. A. Prudames, the President, occupied the chair; and the other Fellows of the Society present were: Lieut. E. R. C. Butler, A.V.D., Mr. A. L. Butters, Mr. F. Barrett, Mr. H. W. Caton, Mr. Clarke, Col. F. Duck, A.V.D., Mr. H. Edgar, Mr. F. Elworthy, Mr. A. E. Gostling, T. Garry, Prof. F. Hobday, Mr. W. Hunting, Mr. S. Hurndall, Major Kettle, A.V.D., Messrs. F. W. Kendall, G. C. Lowe, G. L. Lansley, Prof. Macqueen, F. C. Mahon (hon. sec.), W. J. Mulvey, Prof. Penberthy, Capt. F. Raymond, A.V.D., J. Rowe (hon. treasurer), F. Rickards, S. Slocock, F. Samson, Prof. E. S. Shave, C. Sheather, W. Staply, S. Villar, F. W. Wragg. There were present as visitors Messrs. Morgan Evans, Wilson, Berkhampstead; W. H. Beech, M.R.C.V.S., Brewer, J. Douglas, and John Malcolm, F.R.C.V.S., of Birmingham.

On the motion of Mr. A. L. BUTTERS, seconded by Mr. W. F. BARRETT, the minutes of the preceding meeting were taken as read, and were confirmed.

CORRESPONDENCE.

Mr. F. C. MAHON, hon. secretary, stated that he had received a post card from Professor Walley, Edinburgh, expressing his inability to attend that meeting. Mr. Roalfe Cox wrote on the 14th ult. thanking the President and Fellows of the Society for electing him an honorary Fellow. Further, Mr. Cox expressed regret at his inability to be present at that meeting. Mr. J. E. Jarvis, of Rutland Yard, Knightsbridge, wrote tendering his resignation of membership. Mr. Barker, who was in Germany, had sent a letter expressing his appreciation of the honour which the Society had conferred upon him in electing him a Fellow, and a hope that "he should become a useful member." He added that he had sent a cheque to Mr. Rowe, treasurer of the Society. Mr. Barker did not expect to be in England for the next twelve months but he hoped to be informed of the proceedings of the Society. The Secretary said Mr. J. Randolph Welsby wrote:—"Mr. South directs me to write and ask you to lend him, as secretary of the Central Veterinary Medical Society, an ecraseur. Ours is hardly strong enough for the purpose for which we require it. An answer by return will oblige."

Mr. ROWE stated, with regard to Mr. Barker's letter, that he had received a cheque for £5 5s. which constituted that gentleman a life member of the Society.

On the motion of Mr. VILLAR, seconded by Mr. ROWE, the resignation of Mr. Jarvis was accepted "with regret."

NOMINATION.

A paper was handed in by the Hon. Secretary nominating Mr. F. Smith, M.R.C.V.S., of Lewisham Road, S.E., as a member of the Society. The signatories to this paper were Prof. Macqueen, Mr. F. C. Mahon, and Mr. F. Hobday.

MISSING INSTRUMENTS.

The CHAIRMAN said he thought that the letter of Mr. Randolph Welsby called for some little inquiry or explanation. Had the Secretary any knowledge of the possession by the Society of the instrument for which Mr. South asked.

The SECRETARY: I have not.

The CHAIRMAN: I asked the question privately whether any instruments had ever been purchased by this Society, and I was informed that such was the case. It is probably from this letter that this was known to be the fact. Can the late secretary, Mr. Rogers, tell us what instruments there are belonging to this Society.

Mr. ROGERS:—When I assumed the duties of secretary I received simply the books and papers belonging to the society, and I myself have never seen any instrument, but I have heard a tradition that there were instruments belonging to the society. I, however, have no personal knowledge of their existence.

The CHAIRMAN:—Was there any record of the property in the books?

Mr. ROGERS:—I know of no record.

Mr. S. VILLAR:—If you will allow me, perhaps I can throw some little light on the subject. At the time I undertook the duties of secretary of this society the tradition was that there were a lot of instruments belonging to it. Two thermo-cauteries, Miles casting ropes, a desk, and two or three old volumes were handed over to me, and I may say I have got them now. They are at Mr. Mahon's service anytime he likes to fetch them as they were at Mr. Rogers'.

The CHAIRMAN:—Have you any knowledge of an ecraseur.

Mr. VILLAR:—No, I have never heard of an ecraseur.

Mr. ROWE said he remembered having valued the instruments owned by the society and paying an insurance upon them. There were then two of Thompson's tooth shears and other dental instruments, Farmer Miles casting ropes, and two or three other things. To every summons convening a meeting of the society there used to be appended the intimation that there were certain instruments which the society had at its disposal if members wished to have the loan of them.

The CHAIRMAN to Mr. Rowe:—Have you any knowledge where the shears are at the present moment?

Mr. ROWE:—Not the slightest.

Prof. PRITCHARD:—This seems rather a fatal society with regard to the disappearance of its property—its books disappeared once.

The CHAIRMAN:—May I ask whether any other member present can give us any information with regard to any instrument belonging to this society. I am anxious to have this matter cleared up, because of further action in regard to it. I regret that I did not mention the subject on a previous occasion. It is one I take some interest in, and in respect of which I think we ought to take a different position. I feel that the society should have certain things for the use of its members.

The subject then dropped.

ELECTION OF FELLOWS.

The following gentlemen were, after a ballot, declared respectively, unanimously elected Fellows of the Society: Mr. T. B. Arnald, M.R.C.V.S., Alder House, 4 Alderbrook Road, Clapham Common, S.W.; Mr. H. B. Arnald, M.R.C.V.S., of the same address; Mr. H. Singleton, M.R.C.V.S., Ealing; Mr. W. B. Edwards, M.R.C.V.S., Royal Veterinary College, N.W.; Mr. A. Blake, M.R.C.V.S., Deane House, Redhill, Surrey; and Mr. F. O. L. Walpole, M.R.C.V.S., Royal Veterinary College, N.W.

Election of Honorary Fellow.

The Chairman :—The next business on the agenda is the pleasing one of electing Dr. G. Fleming an Honorary Fellow of this society. The reasons for taking this step have already been fully explained, and it only remains to take a formal ballot in accordance with the society's rules.

After a ballot Dr. G. Fleming was declared unanimously elected an honorary Fellow.

The Chairman :—I am sure that the members of this society are glad to have Dr. Fleming still amongst them, even as an honorary Fellow. (Applause).

"ON FIRING."

By Professor W. Pritchard.

Professor Pritchard began by saying that he did not intend to occupy their time very long, as he had heard remarked, and had frequently said himself, that long lectures or long addresses, like long sermons, ought to have a good deal of backbone in them to make them interesting. He should not dwell long upon any one portion of his subject but simply throw out a few hints in connection with the operation of firing or the use of the cautery. His main desire was to evoke discussion, a free interchange of opinion, and he hoped that what little he did—and what they would probably do to a greater extent—would lead to improvement and benefit.

First he asked : Was it advisable to have recourse to the operation of firing? Some time ago there was a considerable amount of interchange of opinion between the editor of *Truth* and correspondents to that journal as to whether it was absolutely essential or wise to fire under any circumstances; and he might say that the editor and his correspondents on the one side, and his correspondents on the other expressed themselves rather warmly. In saying this he did not imply they were wrong in thus expressing their views. The editor took the side—the cruelty side—with some of his correspondents, whilst other correspondents argued that firing was absolutely necessary. Personally he (Professor Pritchard) was of opinion that firing was, under certain circumstances, absolutely necessary; and he would endeavour to give them his reasons for thinking so. In the first place he was of opinion that this operation produced effects which no application of blisters of any kind or description would produce. Now what was the result of firing? This was another question which, he hoped, they would argue out carefully. How did the operation of firing act? At one time, when he was a pupil at College, firing was regarded almost entirely as a counter-irritant. At the present day those best informed dissented from this view almost completely. They considered that if the operation merely acted as a counter irritant, the same effects might be brought about by the application of various blistering agents. Others argued that it acted as a permanent bandage; that the effects upon the skin were such as to bring about a contraction of it, that it never afterwards became so elastic, and consequently served in this way as a permanent bandage. Now, he did not agree with this, one of his teachers at College used to argue that it was a permanent bandage, while the other maintained that it was only a temporary one. He who held the former view alluded to cases where persons who were badly burnt and thus lost a large portion of skin, in the arm for instance, had that limb gradually flexed in spite of all surgical and other treatment. This contraction of the skin was the result, he contended, of the burning. That argument he (Professor Pritchard) thought might be refuted. The contrary argument advanced was that however large the portion of the skin destroyed by the ordinary firing operation, it was never decreased in sufficient quantity as to act upon the part as a permanent bandage. He—that was, his other teacher—argued that it produced the effect of a temporary bandage more from the deposition that took place on the internal surface of it than by the contraction of the skin, even for a temporary period. Those were some of the arguments adduced in days gone by. He might say at once that he did not agree with any of them. If he agreed with any of them at all it would be with the last. He believed that a certain amount of pressure might be brought to bear as a consequence of the deposition that took place upon the internal surface, as the result of firing. He did not believe that the beneficial effects of the operation—whatever they might be—were due to its action as a counter irritant. And he did not believe (unless there was a considerable surface of skin destroyed by burning which should never occur in the ordinary operation of firing), that any contraction of skin or loss of skin occurred to the extent of acting as a permanent bandage. The opinion he now held was one which, he confessed, he had not held many years because what one was taught in leading strings stuck rather tightly to one in after years, and there was some little difficulty involved in the abandonment of one's early ideas, his opinion was that the deposition which in some instances took place on the internal surface of the skin, was sufficient to produce an amount of pressure upon the parts as to bring about an effect that they knew a counter irritant would produce. He believed that firing as an operation produced more irritation and, he thought, of a lasting character, than any counter-irritant they could apply. He believed that the irritation it created became more deeply-seated, or interfered with structures more deeply-seated than any counter-irritant they could bring to bear—here when he said "counter-irritant" he meant blisters. With the exception of seton he knew no counter-irritant or blister which they could apply that would act so deeply upon the structures as the firing iron. Let them think of two or three diseases as illustrative of this. He would select one or more from the softer structures, and one or more from the dense material of the body, the basement structures. He would begin with "curb." He had seen many cases of curb treated with biniodide of mercury with preparations of cantharides and with a mixture of both, and he had seen even stronger blisters applied, the animal had recovered from lameness but when put to work the lameness returned. Those animals had been subsequently fired, had recovered from the lameness, and had ever afterwards stood sound. Those of his hearers who had treated many cases of thorough-pin had had this experience of the application of the ordinary blister, namely, that it was just as likely to make the thorough-pin twice its original size as to reduce it. There the firing iron came in and produced an effect that no blister would. He could take them to a horse now which had thorough-pin almost the size of the water bottle on the table on either side of the hock, and this size had been caused by the veterinary surgeon's blistering. Subsequently the animal was fired and if it were not for the appearance of the line, they would not know which hock had been affected. Let them take a little denser structure—the flexor tendons. In ordinary cases in the racing stables of "breakdown" as it was called, blistering was in the majority of instances of no use. He did not assert that horses thus afflicted never recovered after blistering, but he did say that in the majority of cases it was of no use; and they knew very well that if those animals were fired—particularly in the case of sprained tendon or ligament—they would recover not only so as to be able to gallop on the flat and win races, but to stand hunting and steeplechasing. He had in his mind's eye a bad case of "breakdown" in a racing animal, which after being subjected to firing

gradually got into work, and afterwards won the "Liverpool Grand National." He thought that that was a fair test. Now, with respect to some of the harder structures; in cases of Ringbone, of Spavin, and some other diseases of the bones of the limbs, numbers of cases had he known where recourse had repeatedly been had to blistering but the lameness had returned, the sound action was but temporary. Then the horses had been fired and recovered. He believed that this was due to the action of the cautery upon the deeply-seated structures, and below the skin if he might so term it; and he thought no blister would produce a similar effect. When he expressed this opinion on one occasion two or three years ago, a gentleman present asked "What about setons?" Well, he had no objection to setons. He would say further that he believed that to a very considerable extent the seton would produce a similar effect to the firing iron, but he had known cases of seton fail where subsequent firing had brought about recovery. There was another advantage in firing: if they fired a horse they were pretty sure to secure for him a longer rest than he obtained if they blistered him.

Well, thus far he had been advocating firing. He would now speak of the abuse of it. There was no doubt in the world that the controversy which had taken place in the columns of *Truth* would never have been evoked but for the abuse of firing. Firing horses when matters were positively and beyond a doubt incurable was an improper thing to do, and in his opinion an act of cruelty. Further he believed that firing a horse that was lame with side bone was a mistake. He thought that all they did by firing in that case might be done by blistering. He considered that all the benefit they derived in that case might arise from the application of a blister. He did not think that any deep-seated action in the case of side bone was calculated to be beneficial, and he very much questioned whether he was not safer in going a little further and saying that it was just as much likely to increase the size of side bone as it was to get rid of the lameness. He knew very many veterinary surgeons who were in the habit of firing horses for side bone and hence his opinion on this subject might be regarded as a bold one. He believed that firing was very much abused, and should not be employed if the animal operated upon had not been first properly prepared. Cases of sloughing no doubt occurred over and over again if the part to be operated upon had not been properly cooled down. The animal should be subjected to a low diet and the action of purgative medicine, and the leg kept swathed in wet bandages. The adoption of this plan he advised in every instance, and more particularly in cases where the animal was "straight out of hard corn," as they commonly expressed it. He should never forget going on one occasion to see a horse not far from Red Lion Square which had been fired, and whose skin was hanging about his fore legs like a pair of pantaloons. That horse had been subjected to a firing iron while he was yet full of oats and beans, and was not properly prepared. Hence he contended that firing might be abused if the animal was not first properly prepared.

There was an old fashioned plan where firing was abused, a plan which, he was thankful to say, was dying out. Still, it was frequent enough even now in some parts of the country. He referred to the practice of firing animals for the purpose of "strengthening them." It was a very common practice in Ireland. In firing a horse in his hock to prevent curb or spavin, the idea was that the hock was strengthened thereby, and the outbreak of these maladies prevented. That was an abuse of firing. Again if an animal, six or seven years old, was affected with spavin or had a curb and was sound in action, they had a fair right to conclude that he had done good work, a fair amount of work; and to advise firing when an animal was going sound was what he called an abuse of the operation.

Then as to the manner in which firing was performed, speaking generally there were two forms or modes of firing. One by means of the pointed iron, pyro-puncture, the other in lines, "feather firing" usually termed. The former he need not dwell upon, as they all knew how it was performed and in what maladies it was usually had recourse to. One remark he would make about hyropuncture and it was this: it blemished the horse to the least extent, and had a fair chance of bringing about recovery. Take curb; there was no necessity to blemish the horse's hock. With regard to line firing, he expressed a hope that the day was not far distant when that fearful scoring they used to see and, indeed, saw now far too frequently, of putting lines an inch apart or more and burning almost—if not quite—through the skin would wholly cease. Suppose they were firing a horse and treated him in this barbarous fashion, the skin was burnt nearly, and in some instances, absolutely through. However well that animal was prepared, if this were done they were certain to have a considerable amount of suppuration—if they did not get sloughing pieces of skin between the lines. Now he was firmly of opinion that this was all wrong. If they put the lines closer together and fired more superficially they would produce just as good effect; they would not run a fiftieth part of the risk of producing sloughing; and they would blemish the animal to a very slight extent indeed. That was his opinion, and he should be very happy to hear any argument in opposition to it.

As to the depth they should go,—well, that required a certain amount of experience. The young amongst them must benefit by the experience of those who had gone before them, and those who had fired many horses would have found out how to fire not too deeply, but yet a sufficient depth. No rule or hard and fast line could be laid down upon this point, because for one thing, as the character of the horse was so must be the depth of the line. In the case of a thoroughbred horse, for instance, a lighter hand and a much more superficial line would be needed than in firing a cart horse. Some people said they could determine the depth by the appearance of the line they were making—whether it was a brown colour or a white colour. That, however, was all nonsense. The colour of the line depended far more upon the heat of the iron. If they had an iron at white heat they would have a white line, and if they did not look sharp they would very soon be through the skin before any brown line appeared at all.

As to the kind of iron to be used that was a matter of taste. Some he had seen firing with a very light and small iron, whilst others fired with a heavy one. He had seen all sizes. Personally he liked an ordinary firing iron having a fair amount of weight in it, and this not only because it would steady the hand, but because it would retain heat much longer than a smaller iron. He advised that they should always, if they could, put their iron into a coke or charcoal fire. This was frequently awkward in London, but there was considerable advantage in it if they could only manage to carry it out; the iron itself did not oxidise, it was always smooth and clean and did not require to be rubbed upon some substance—stone or brick—before it was used.

As to heat, he liked to have his iron at white heat; he did not like firing with what was commonly called a cool iron. If they used the latter more time was needed to get a sufficient depth into the skin, and on that account they absolutely burnt the skin on both sides of the line to a greater extent than they imagined; besides which they ran a great risk of afterwards bringing about sloughing. But with an iron at white heat he could get a

sufficient depth into the skin without cooking the skin on either side of the line.

A great deal was said as to the manner in which lines should be drawn. While some hold that they should be drawn in a transverse direction, others considered they should be drawn obliquely. Personally he had always advocated and adopted the oblique direction. In firing inside the hock, it was usual to make a central line and then draw an oblique or transverse line from either side of it. Never let the points of the three lines meet, or if they did let the central line be simply a singeing of the hair, simply a line to guide formation of the other lines. If they got the points of the three lines at one place they were pretty certain to have a blemish there about the size of the end of their finger. With a little practice they might "feather fire," as it was called, without the use of the central line at all, and the appearance would be quite as pretty. He was not an advocate for firing simply to make beautiful feathers and stars and so on. The consideration which should be uppermost in their minds was the production of the greatest amount of good by the operation with the least amount of mischief to the part.

Firing for sandcrack had been suggested. That was a thing he never did. His treatment for sandcrack was to give support to the margins of the crack and then have recourse to a stimulant to the coronet with a view of bringing about a better secretion of horn. In one form of sandcrack there was a superficial crack at the bottom of the foot extending in an upward direction it involved a few of the outer fibres. There the firing iron was used and, burning a transverse direction into the hoof beyond the depth of the superficial crack, the crack disappeared. That was the only firing he advocated in sandcrack and then it was not necessary because if they filed the nick it would have the same effect.

Speaking of the thermo-cautery, Professor Pritchard would not say he had not used the firing iron, for circumstances over which he had no control occasionally prevented his using the thermo-cautery, but certainly for the last fifteen or twenty years he had regularly used the thermo-cautery, and he preferred it for many reasons. As he often told a client, he could fire a horse in the middle of a forty-acres field with a match, even during a downpour of rain. That was a great convenience, especially in the country where it was difficult to get irons properly heated and as quickly as they were required. The paramount advantages of the thermo-cautery over the ordinary firing iron were that the line it made was very much closer, the margins were very much more definite, and the wounds healed, he was going to say 10 per cent. better, but he did not know how to put a percentage in the matter. In using a thermo-cautery he had never had the slightest approach to sloughing, and he could not recall a case in which the parts suppurated to the slightest extent. The usual thermo-cautery was a bottle containing a spirit—benzoline was generally used—to which bottle was attached at one end an india-rubber-tube, the other end communicated with the instrument. Then there was a syringe by means of which a stream of air was pumped into the bottle. The vaporised benzoline heated the end of the iron—he called it an "iron" but it was really platinum. The vaporised benzoline passed into the centre tube and a white heat was kept up. At his request Mr. W. H. Beech, M.R.C.V.S., inventor and patentee of the portable cautery, East Castle Street, Bridgnorth, had attended that meeting for the purpose of exhibiting and describing the instrument he had invented, and he (Professor Pritchard) would pause in his remarks until Mr. Beech did this.

Mr. W. H. BEECH then exhibited his invention, and practically tested it, remarking that the platinum point used was one which Professor Pritchard had employed for thirteen or fourteen years to his (Mr. Beech's) personal knowledge. Once they got a good point they would not want to renew it very often. He explained the difference between his invention and the old instrument. In the case of the latter they were obliged to carry a bottle of spirit with them, whereas in this instrument the benzoline was put in the handle, and no matter what was the position of the handle the benzoline would not run out, only the vapour escaped. A charge of benzoline would last three quarters of an hour.

The CHAIRMAN: Very inexpensive.

Mr. BEECH: Oh! yes, about a halfpenny will fire a horse.

Professor PRICHARD (continuing) said with regard to the treatment of horses subsequent to firing, he was an advocate for tying them up for some considerable time. In some parts of the country it was thought unnecessary to tie a horse up after being fired, for more than four or five days. He had been told this by pupils when he had examined them. Well, he should be sorry to let one of his patients loose at the end of that time—four or five days—even with the cradle on. He considered it advisable to keep the horse's head secured until the wound had nearly healed. There was no cruelty in this provided the horse was exercised daily so as to take the stiffness out of his legs.

A word or two with regard to blistering. It was usual, as they were aware, to apply a blister after firing a horse. This he thought was advisable because it maintained the action of firing longer than it would otherwise last. It was a common practice with some to apply a blister immediately after the operation; he, however, was inclined to think that an advantage was to be obtained if a few days were allowed to elapse before this blistering was applied. Let the first effects of firing to some extent pass off and then apply the blister; thus they would get a renewal of the action and the process or result of firing would last longer. Care should be exercised in the selection of the agent used so that it might not be of a character to produce sloughing, and the best agent to prevent this was, in his opinion, biniodide of mercury 1 to 8. He had never seen sloughing follow the use of the biniodide of mercury at the strength he had named. He had now occupied more of their time than he had intended and he felt that after all, he had only dealt very slightly with some points. At the same time he hoped he had said sufficient to excite in their minds a little difference of opinion, and he desired a free interchange of ideas. He thanked them for the patient audience they had accorded him, and he hoped that mutual benefit might arise from what he had been venturesome enough to place before them. (Applause.)

DISCUSSION.

Mr. W. HUNTING, who opened the discussion, said he had listened to Prof. Pritchard with some pleasure and some disappointment. He had hoped that he would have told them how firing acted, but perhaps, one had no right to expect so much. No doubt it seemed to be the correct thing not to believe in anything unless one thoroughly understood it and knew how it occurred, and why. When they came to think of it, however, they realised that this was a wrong idea. With our finite minds we ought to accept any truth, whether we understood it or not. Provided we were satisfied that the thing existed or obtained, we should not trouble ourselves too much as to how or why it did so, but accept it with simple faith. The question under their consideration was one in which a great deal of simple faith was required, because so-called "experience" of firing amounted to very little. Of course Prof. Pritchard disposed summarily of the theories of a counter irritation. That was a nice expression of the meaning of which he (Mr. Hunting) avowed his ignorance. Nobody yet had

offered an explanation except Professor Williams, therefore they might safely disregard the counter irritant theory as a mere expression without any definite significance, and they might also discard the permanent bandage theory, because they would have to live long in order to find any permanent bandage, no matter how badly the animal was fired. Besides, in the case of the permanent bandage—if that were a theory upon which one could work, they would have to do all their firing in vertical lines and not transverse lines, whereas they knew that transverse lines did act as well as the others. Now, the difficulty was when they came to those illustrations which Prof. Pritchard gave them. He told them that firing had done good in curb because he had known a case or cases in which the animal had been blistered and not cured, and then he was fired and became sound. Well, he (Mr. Hunting) could give them more illustrations totally different. Cases where animals had had nothing done to them and yet went sound. Now supposing such horses had been fired, they would have said the firing cured them. Again, blistering did not always cure. He never saw a case of curb in which the horse went permanently lame, no matter what they did with it. Therefore he was not prepared to allow that even the fact of a large number of horses being blistered and going lame and then being fired and going sound, was any proof whatever in favour of firing.

As to thoroughpin, he saw a case which was beautifully illustrative, a case in which the thoroughpin was about the size of his head. He asked the owner what he was going to do with the animal; have him pole-axed? "No," the owner replied, "my groom will come and attend to that hock." Twelve months afterwards he (Mr. Hunting) saw the same animal and to his astonishment there only remained two large blemishes on the site of the thoroughpin, but the swelling had all gone. Suppose that animal had been fired, what a splendid illustration of the beauties of firing this would have been. What was done in this case? Some irritant was applied, some blistering preparation—the prescription for which, given me as a great favour, I lost. (laughter). It was some irritant; but if a thoroughpin of that size could be removed without firing, what was the use of firing it? Again with regard to the flexor tendons, no doubt they could all point to cases in which they blistered without any good effect, then firing had been resorted to and the animals became sound afterwards. They had also seen cases where firing had been tried first and had done no good. Then there were cases where there was blistering and nothing else, and where the horses went on all right. In one case he knew of the horse was treated without blistering or firing, and after two years rest was able to gallop as well as ever, and had stood the necessary training for steeplechasing. Again Prof. Pritchard had seen horses blistered for ring-bone without any good result; he had seen them fired and they became sound. Well, what he (Mr. Hunting) wanted to get at was how many cases had they by careful observation, of a similar kind in which they were assured that exactly similar conditions obtained, where they were able to compare blistering, firing, and any other treatment they liked. A little chloride of sodium on the tail was a most effective thing for some diseases. Applied indefinitely it had an action that was astonishing. (Laughter). Not long ago he met a gentleman in a train. "Rheumatism," the gentleman enquired of him. "Yes" was the reply. Then he offered him a prescription which he said he had tried himself and which was very simple. He said "you want to take a teaspoonfull of mustard seed in milk every day. You must not lose patience. It took me a year and eight months before my rheumatism was any better." (Laughter). Well, if they only gave them time in that way most diseases would disappear, and the difficulty was to know when their firing had been the cure and when their animal had got better in spite of their firing. Somehow he did not think that they had advanced during the last twenty or thirty years one iota towards an explanation of the good derivable from firing. At the same time, though they had not advanced in explaining it, he was not disposed to disallow any good accruing from firing. By this operation they gained a good deal more time. It was a heroic remedy. When they had fired an animal, no one else could do much more. The rest was important. Another suggestion of Prof. Pritchard's was that the animal should be prepared for the operation—that took more time. If they would allow all the time, the rest, and other things, then it was difficult to know exactly what additional good the firing did. He did not say it did none, he only said that they should keep more correct accounts of their cases, point out every incident connected with them, and try to follow them; but this was very difficult. They fired a horse and its owner, as soon as it got sound, showed his faith in the treatment by selling it to a friend.

He quite agreed with Prof. Pritchard that there were many abuses of firing. Firing with the idea of strengthening the limbs was simply cruelty to animals. Firing for the prevention of lameness he was not so sure about. It was extremely difficult in such cases to know when firing did good and when it did not. As to the method of firing he thought that it should be done as nicely as possible, one certain effect of firing a horse was to put a permanent mark upon it. He had seen hunters fired by countrymen blemished in the most awful manner. It was desirable that in firing a horse the practitioner should be able to do his work in such a way, so nicely and well, that he could leave his trade mark on the animal as it were and be proud of it. Making a mark in the direction of the hair would prevent the hair from covering it. Firing transversly to the hair would never leave a mark that would be a blemish as firing in any other direction would do. He agreed with Prof. Pritchard that a man who used the thermo-cautery which Mr. Beech had shewn them would be able to do his work much more easily and neatly than a man who used the ordinary iron. He knew no instrument with which a man could do firing more neatly than with a good thermo-cautery. With that instrument they got a regular heat, and never a jagged edge as with the ordinary firing iron. At first, however, the thermo-cautery was a little trouble, because in passing over the irregular surface of the part it was more apt to slip than the ordinary iron. The result of his (Mr. Hunting's) remarks was, he feared, to leave them in the same mixed mental condition with regard to the subject of firing that he was in himself. He did not know what good firing did. He did it himself sometimes He generally did it with the idea that, if it did no good, he did not know what else would do any good. He should be very sorry to venture upon any scientific explanation of its action. (Applause.)

Prof. MACQUEEN said he felt himself very much in the mental condition of the last speaker, although he might hope to avoid addressing himself to them in the same strain. They noticed that Mr. Hunting asked a great many questions and answered them to his own satisfaction. He (Prof. Macqueen) was somewhat surprised that Mr. Hunting was not a little better acquainted with the action of a counter-irritant. He should have thought that he would have known that experiments had been frequently performed to prove that a counter-irritant applied to the skin succeeded in altering the circulation of the parts beneath. That had been demonstrated in the case of a blister applied to the loins where the circulation of the kidney became rapidly diminished. A similar result has been attributed to a counter-irritant when applied to the chest in cases of pneumonia. Those were statements which were beyond dispute at the pre-

sent day. With regard to firing, the only thing Mr. Hunting thought about it was that it did something which was not therapeutical—it gained time. Well he (Professor Macqueen) always understood that in the therapeutics of lameness in particular the chief item of treatment was rest, and if a veterinary surgeon succeeded in gaining time by firing, surely that must be included in what were called the therapeutics of lameness. To return to Prof. Pritchard: he must say that he did not agree with him when he spoke of a deposition or deposit on the inner surface of the skin. He rather inclined to the belief that firing instead of producing a deposit was more likely to succeed in removing one. With all due respect to Prof. Pritchard's views on this question, Prof. Macqueen's observation had led him to the conclusion that firing properly carried out succeeded in removing the greater part of the thickening that commonly occurred in cases of lameness. He thought that that was an undeniable result of the application of the firing iron—the removal of a certain amount of the thickening of the part. He did not think that the application of the firing iron brought about a deposition of any special tissue, or that it acted as a permanent bandages. Prof. Pritchard compared the firing iron with the seton and seemed to prefer the later to the former. His illustrations he (Prof. Macqueen) would pass over. Coming to the abuses of firing, he agreed with Professor Pritchard that firing sidebones was in the majority of cases uncalled for; but at the same time he must say that he had very seldom found or satisfied himself that side bone caused lameness. As to the preparation of the part, he did not quite go the length of Prof. Pritchard. There might be something in the statement that a horse which was "off hard corn, full of oats and beans," was not a proper subject for the application of the firing iron; but he must say that he did not agree that because a horse happened to be in good condition, he was in a worse state for the application of the firing iron. He did not believe in the statement (Prof. Pritchard did not make it) that firing was likely to strengthen a horse's hock. Prof. Pritchard made a remark about firing a spavin in a sound going horse. He (Prof. Macqueen) never heard of that practice. Prof. Pritchard preferred point firing to line firing; he objected to the blemishes that line firing was apt to produce. He (Prof. Macqueen) preferred line firing because he believed it was much more efficacious than point firing. He believed that line firing had a better effect than point firing. Prof. Pritchard objected to deep and widely placed lines. He (Prof. Macqueen) objected to deep lines but he could not see how anyone could urge any objection to widely placed lines. He thought there was a great mistake in firing too deep—in firing through the skin. He was not, however, aware that many practitioners did fire through the skin save by accident, and if they did so they ran the risk of sloughing and that was a dangerous thing to risk. Prof. Pritchard perferred close lines to widely placed ones and he (Professor Macqueen) was in favour of closely placed lines provided the firing was properly carried out. He now came to a point where he differed from the professor. Prof. Pritchard talked about the colour of the line in firing as nonsense. The colour depended, he said, upon the heat of the iron and he referred to the thoroughbred horse where if one fired with the expectation of seeing a certain colour, the iron would be through the skin before one knew exactly when.

Professor PRITCHARD:—If the iron were at white heat.

Granted, but even then he differed from the professor. He maintained that a thoroughbred's skin was not different in its constitution from a cart horse's skin; and the proper application of the firing iron would bring different colours to view according to the depth of penetration. He believed that in most cases attention to the tint of the line was of considerable value to the operator. With regard to the kind of iron he did not think there was any special iron that was better than another, so long as it was shaped like an ordinary flat-edged firing iron. As to the direction of line he was in favour of the oblique direction. He disagreed with Professor Pritchard as to the use of firing in cases of sandcrack. He (Professor Pritchard) said he would not fire in sandcrack. He mentioned that his principle in treating sandcrack was to give support to the sides of the crack. Now his (Prof. Macqueen's) idea of treating sandcrack was the very opposite: he diminished the support of the sides of the crack in order to diminish friction, and he certainly recommended firing in many cases of sandcrack where there was no great local pain, and where the horse was going fairly well. He fired with the object of diminishing friction, and he believed that it was a matter of no great importance, whether the line was parallel to or across the crack. Then they came to the instrument that was to be used. and the thermo-cautery was recommended. He had used Paquelin's thermo-cautery, and if every horse was to be cast then the thermo-cautery was a useful instrument, but if a horse was to be fired standing he should certainly select an iron everytime for the operation. In such cases he did not think the thermo-cautery was a convenient instrument to use but it was possible that Mr. Beech's instrument would be more suitable. He preferred an iron with an unusually long handle and with such an instrument he believed that one who was accustomed to use it could do as good work as the thermo-cautery could produce. As to the wearing out of the iron, its edge becoming rough and its head losing heat—all these were matters of detail. He had passed over some things Professor Pritchard said because he did not think they admitted of agument. They were all acquainted with the conditions, with the difficulties of general practice. They knew that a horse that was presented to them lame from some cause, required treatment; and while Mr. Hunting's idea if carried out might be more humane, they must look to general practice, and general practice. in treating lameness was to do something; and according to their intelligence they did what they considered best They applied a blister or they fired the skin and afterwards blistered, and there was not the slightest doubt that they succeeded in many cases in getting rid of the lameness in a shorter time than if the horse was left to itself. (Here, hear). If the function of the profession was to shorten suffering, to shorten idleness, then he thought that they succeeded to a certain extent with a blister, but in many cases they would succeed quicker, and give better satisfaction to their clients if they fired without any unnecessarydelay. (Applause).

(To be continued)

NATIONAL VETERINARY ASSOCIATION.

A meeting of the Provisional Committee was held at 10 Red Lion Square, London, on Thursday, Dec. 7th, 1893, at 5 p.m. Mr. W. Hunting in the chair. There were present Professors Macqueen, Pritchard, Penberthy, Shave and Hobday, Major Kettle, Captain Raymond, Captain Butler, Messrs. Barrett, Butters, J. A. W. Dollar, Edgar, Hurndall, Mahon, Malcolm, Mulvey, McOnie, Rudames, Roberts, Sheather, Singleton, Villar, Wragg, Wilson and Wheatley.

Mr. Hurndall was elected chairman, and Professor Hobday secretary of the Provisional Committee, and a small acting committee consisting of the following gentlemen was selected.

The President of the Association, chairman and Secretary of Provisional Committee, Professors Macqueen and Penberthy, Major Kettle, Messrs. J. A. W. Dollar and McOnie.

It was decided that the Annual Meeting of the Association be held on the two days succeeding the General Meeting of the Royal College of Veterinary Surgeons, viz., June 8 and 9. Also that the Annual Dinner be held conjointly with that of the R.C.V.S., subject to the consent of that body.

Prof. Penberthy consented to prepare a paper on "Pain, its Indication and Significance in the Domesticated Animals," the discussion to be opened by Prof. W. Alston Edgar; or if he be unable to be present, by Prof. McCall, Junr. Mr. J. A. W. Dollar consented to prepare a paper on "Animal Vaccines," the discussion to be opened by Capt. Butler; or if he be unable to be present, by Mr. Villar.

After a vote of thanks to the chairman the proceedings terminated.

FREDK. HOBDAY, Hon. Sec.

EXTRACTS AND NOTES.

DISEASES OF ANIMALS TRANSMISSIBLE TO MAN.

Professor McFadyean recently delivered the last of his three lectures on "Diseases of Animals Transmissible to Man." Principal Walley of the Royal Veterinary College of Edinburgh occupied the chair. The subject the lecturer specially dealt with in this lecture was the disease caused by vegetable parasites or germs which man may acquire by means of meat or milk. The first of these taken up was anthrax. He pointed out the character of the organism and its spores, and how animals became infected. The flesh of animals dead from anthrax was dangerous if taken as food, but the danger in this country was less than it appeared to be because, as a rule, the temperature was lower than was required for the formation of spores, and it was the spores which were most dangerous, as they were not destroyed in the stomach. A considerable number of anthrax carcases reached the market, but the sending such flesh for sale was a crime for which a fine was no adequate punishment. The more common mode of infection to man was through skinning and dressing animals dead from the disease, malignant pustules resulting from inoculation through a scratch or abrasion. Occasionally infection was through the lungs, the spores being inhaled, as in wool-sorter's disease. For the prevention of human anthrax the public health authorities were to be looked to to keep all infected flesh out of the market by a thorough system of meat inspection. There were many places where the system of inspection in force gave no guarantee that the flesh of anthrax animals would not find its way into the market. He referred to the prevention of infection by inoculation. The lecturer then referred to actinomycosis. This disease occurred most frequently in cattle, but man was liable to it. It was improbable that the disease was communicated to man from cattle. Cattle contracted it probably from straw on which the germ was growing, and this was most likely to be the source of infection in man, so that chewing a straw might not be as harmles as farm labourers regarded it. He next dealt with tuberculosis, and referred to its prevalence in cattle and in man; to the experiments made in France in 1865 and 1868, which proved that it could be experimentally transmitted from one to another, and from man to animals; and to the discovery by Koch in 1882 of the bacillus of tubercle. These discoveries gave rise to much discussion amongst sanitarians as to the danger of tuberculous meat, one section maintaining that no measure short of seizure and total destruction of every carcase affected in any degree with tuberculosis would sufficiently safeguard the public health, and the other section protesting that no such wholesale destruction was required, since only the actually diseased parts in a tuberculous animal contained the germs. At the International Congress for the study of tuberculosis, which met in Paris in 1888, the advocates of total seizure had it nearly all their own way. This decision awakened public interest, and the Government appointed a Royal Commission to report on the subject. Their report had not yet been received. Meanwhile we should consider the danger and decide upon what measures ought to be taken to protect ourselves. Between 10 and 15 per cent. of all cattle slaughtered for human food in this country were affected. Of the cows in Edinburgh giving milk probably over 20 per cent. were tuberculous; of these only a small proportion of cases had their udders affected. He pointed out the danger of eating raw tuberculous meat, which was not as a rule done by people in this country. With reference to milk he pointed out its dangers when the udder was tuberculous. Unless the udder was tuber culous he had found by experiment that the milk was not dangerous. The most complete security against infection from milk was obtained by steaming it before use. The custom of steaming or boiling milk had not come into general use because the flavour of the milk was distasteful to many people. It might be said that since, by merely abstaining from the use of under-done meat and raw milk, everyone can absolutely protect himself against the danger to which he is exposed, the public health authorites had no duty in the matter beyond disseminating knowledge. This, however, he did not think the public would agree to, and it would be reasonably expected that if there were any simple and not too expensive means of keeping tubercle bacilli out of the market those who were trusted to look after the public health would see that these means were put in force. He then referred to the means that might be taken to keep tuberculous meat out of the market by inspection and the abolition of private slaughter-houses. With regard to unwholesome milk, compulsory inspection of dairy cows at short intervals by trained inspectors was necessary. He further pointed out how the prevalence of tubercle amongst cattle might be reduced. He then briefly referred to foot and mouth disease, which occurred from time to time as an epidemic among human beings by means of milk from affected cows. Boiling or steaming made the milk safe. Meat-poisoning as distinguished from meat-infection, was the last point and he pointed out its nature, and how the former differed from the latter.

THE AGRICULTURE OF LONDON.

That London should have within its boundaries any development whatever of the great national industry will probably come as a surprise to most readers. By the term London is here meant the Administrative County of London, as defined by the Local Government Act, in accordance with which London has for the first time received recognition in the Agricultural Returns as a separate unit. We must go outside the recently-published returns to learn that London, as thus defined, embraces a total area of 75,442 acres, made up of 31,484 acres in Middlesex, 23,898 acres in Surrey, and 20,060 acres in Kent. A more concrete view of this area will be conveyed by stating that it is made up of the Parliamentary boroughs of Battersea and Clapham, Bethnall Green, Camberwell, Chelsea, Deptford, Finsbury, Fulham,

Greenwich, Hackney, Hammersmith, Hampstead, Islington, Kensington, Lambeth, Lewisham, City of London, Marylebone, Newington, Paddington, St. George (Hanover Square), St. Pancras, Shoreditch, Southwark, Strand, Tower Hamlets, Wandsworth, Westminster, and Woolwich. The population of this area in 1891 was 4,232,118 persons, but the agricultural statistics of this limited but densely peopled district are now for the first time available. The total area under crops of all kinds, excluding nurseries, in London, is 14,927 acres, or as nearly as can be one-fifth of the total acreage. This is made up of 812 acres of corn crops, 2840 acres of green crops, 401 acres of clover and rotation grasses, 10,182 acres of permanent grass land, 332 acres of small fruit, and 360 acres of bare fallow. The detailed return of the corn crops shows that London had this year 387 acres of wheat, 234 acres of oats, 75 acres of beans, 54 acres of peas, 44 acres of rye, and 18 acres of barley, these making up the 812 acres of corn crops already referred to. Similarly, the 2840 acres of green crops comprised 586 acres of potatoes, 455 acres of mangel, 358 acres of cabbage, kohl-rabi, and rape, 223 acres of vetches or tares, 122 acres of turnips and swedes, and 1096 acres of other green crops. Over two-thirds of the entire cultivated area of London are, strangely enough, in permanent pasture, of which only one-third is kept for hay, the remainder being grazed, or possibly waste land.

Turning to live stock we learn that London this year had 991 horses, 7645 cattle, 5438 sheep, and 3233 pigs. Obviously the number of horses does not include town draught horses, or carriage and riding horses, for it is made up exclusively of 760 horses used solely for agriculture, 171 unbroken horses and 60 mares kept solely for breeding. That cattle should exceed sheep in numbers would be an anomaly in any district, but of the 7645 cattle in London, no less than 6657 are described as cows and heifers in-milk or in-calf, so that the connection with the town milk trade is at once apparent. It is probably correct to say that six-sevenths of the cattle of London are dairy cows. Of the 5438 sheep only 497, or about one-eleventh come under the denomination of ewes kept for breeding, from which it would appear that the sheep "farmers" of London are addicted in the main to "dry flocks." Of the pig population, 318 are sows kept for breeding, this number representing approximately one-tenth of the pigs of London.—*The Morning Post.*

A CASE OF MALIGNANT PUSTULE TREATED SUCCESSFULLY.

(Under the care of Mr. W. H. Moore).

Public attention in London has been recently drawn to this disease on account of the fatal ending of one or two patients affected with it. We have published a case of severe anthrax in the "Mirror," which was under the care of Mr. Davies-Colley at Guy's Hospital,* and in which the treatment by means of ipecacuanha, given internally and applied externally, was successfully carried out. This treatment was first recommended by Dr. Muskett in 1888,† wrote highly of its usefulness after his employment of it in fifty cases; in these the results had been uniformly good. Ipecacuanha has no influence on the spores, although it is fatal to the bacilli anthracis; the former are not, however, found in the development of the disease in the human body. Others have, however, written very strongly in favour of other methods of treatment—for instance, Jarnovsky reported seventy-two cases of anthrax, all of which were successfully treated by injections of carbolic acid, and Scheffer and Stritzner have recorded results as being favourable. There is an impression that the disease is on the increase, but it is difficult to prove this. We think that the medical practitioner of the present day is better able to recognise it, and many cases are sent to hospitals for treatment which were formerly looked upon as being due to blood poisoning and attended at home. For the notes of this case we are indebted to Mr. P. E. Davies, house surgeon.

A lad seventeen years of age was admitted into the Kidderminster Infirmary at 1 p.m. on Sunday, July 30th last, suffering from malignant pustule. He had always enjoyed good health. His occupation was that of a "creeler" at one of the local carpet mills, and he slept with a brother who was a woolsorter. Nine days before admission, whilst at his work, the patient accidentally knocked his forehead against some ironwork attached to the loom. The blow was not severe; in fact, he would not have noticed it had it not been for the subsequent history of the case. As far as he could recollect the skin was not broken. Nothing was noticed until the following Wednesday, when he discovered a red pimple on the site of the previous contusion. He attached no importance to it, as he felt perfectly well. On the following day he noticed that the parts about the right eye were swollen and the pimple had "burst"; he also felt "queer," On the following day the swelling had increased considerably, so that he could not open his right eye; he still had no pain in the affected part, but he felt ill and weak. He consulted Mr. Moore, and whilst in his consulting room had a severe attack of syncope. He was advised to go into the hospital.

On admission the patient looked ill, the pulse was 104 (soft), the skin was moist, and the temperature was 101° F. On the right side of the forehead, about one inch above the orbital ridge, there was a swelling measuring about an inch and a half in diameter; the centre of this swelling was occupied by a dry, black slough about the size of a pea; around this was an incomplete ring of vesicles, which for the most part merged into each other; outside this was an inflammatory zone about one-sixteenth of an inch in diameter; the surrounding tissues for some distance felt brawny and indurated; both eyelids were extremely œdematous, the right being closed; the glands at the angle of the jaw on the affected side were much enlarged, and the skin over them was tense and shining. There appeared to be a general swelling of the neck, and the patient stated that his chest was swollen, but no œdema of the chest wall could be detected. There was an entire absence of pain and no local tenderness or suppuration. The serum from the vesicles showed well-marked anthrax bacilli on examination. At 4 p.m. Mr. Moore excised the whole of the pustule, together with the marginal tissues, by a circular incision. The surface of the wound was extremely hard and indurated, and bled freely. The wound was dressed with a paste composed of ipecacuanha and water and double cyanide gauze. A powder containing five grains of ipecacuanha with one-sixth of a grain of morphine was ordered to be taken every four hours.

July 31st.—The patient slept at intervals during the night; he was sick twice after the first powder, but on repetition of the dose he retained it. The dressings were very adherent to the wound. The ipecacuanha paste was re-applied. There was total absence of pain or tenderness on dressing. The face was not so swollen, the pulse was 100, and the temperature 100° F.

Aug. 1st.—He slept well. There was no sickness after the powders. The swelling of the face was considerably diminished; he can open both eyes. The pulse was 86 and temperature was 98°.

* The Lancet, Oct. 17th, 1891.

† The Lancet, Feb. 11th, 1888.

3rd.—The swelling has entirely disappeared. The powders were ordered to be taken every six hours.

4th.—The ipecacuanha was discontinued, both internally and externally.

The patient was discharged on Aug. 27th, twenty-eight days after admission, the wound having cicatrised; he was feeling perfectly well.

Report on the Section of the Specimem by the Pathologist to the Guy's Hospital Gazette.—The specimen is one of malignant pustule, removed in an early stage of the disease. The affected area of skin is densely infiltrated with leucocytes, which have infiltrated and destroyed the follicles etc.; the epithelium has undergone coagulation necrosis, and the layers have been partly separated by masses of leucocytes. Towards the base of the inflamed area the process of absorption of striated muscle by leucocytes is well shown. There is no pus. Evidencing the intensity of the irritant are small ecchymoses among the leucocytes. Anthrax bacilli are moderately abundant in the inflammatory exudation.

Remarks by Mr. DAVIES.—The points of interest in the case are: (1) the probability that the patient at the time of the accident sustained a slight abrasion of the forehead, and that he became infected from his brother; (2) the attack of syncope not resulting from pain, whilst the patient was being examined; and (3) the entire absence of pain, tenderness, and suppuration.—*The Lancet.*

UNSCIENTIFIC MEAT INSPECTORS.

TO THE EDITOR OF THE LIVERPOOL COURIER.

SIR,

It is with no slight amount of diffidence that I address you regarding the extraordinary proceedings at the Birkenhead Police Court on Saturday, a report of which appeared in your issue on Monday last under the heading of "Meat Inspection in Liverpool and Birkenhead—extraordinary divergence of opinion." Briefly stated the facts are. Inspector Wagstaffe, meat inspector for the borough of Birkenhead, whilst inspecting meat exposed for sale in the shop of William Dale, Watson Street, Birkenhead, seizes four pieces of beef, which he considers unfit for human food. Dr. Marsden, medical officer of health for the Cheshire County Council, Prof. Barron, University College, Liverpool, and Dr. Laird Pearson, afterwards examined the beef and were of opinion it was quite unfit for food. "They considered it would be dangerous for any person to eat such meat."

Mr. Thompson, solicitor, on behalf of the owner of the beef, submitted that his client had purchased it in all good faith at the Liverpool Abattoir, where it had been passed as fit for food by the inspectors of that institution—the Public Abattoir of the City of Liverpool—and as he very pertinently puts it, "he thought it was very hard the blame should not be placed on the right shoulders."

Then comes the evidence of the Liverpool Meat Inspectors, Messrs. Renton and Jones, who state they examined the carcase in company with Inspector Luya at the Liverpool Abattoir and not only have these inspectors the hardihood to assert the beef was quite fit for food, in contradiction to the medical evidence, but they go further, and have the impertinence to swear the animal had suffered from pleurisy, and not, as testified by the medical experts, from tuberculosis or consumption, a disease which is the scourge of the bovine tribe, and a disease from which thousands of our own countrymen die annually, and which is shown from statistics to be considerably on the increase.

How much longer the British public will endure this state of affairs I cannot conjecture, but it is time we in Liverpool did something to prevent such disgraceful exposures, where meat inspectors—Corporation officials, devoid of all scientific training or knowledge, should be allowed to give evidence against the corporate health officials of a neighbouring borough, and on oath contradict the evidence of gentlemen who have made science and pathology a life-long study.

It may seem superfluous to some for a veterinary surgeon to offer an opinion as to the fitness or unfitness for human consumption of any given carcase of animal food, but I am of another way of thinking, for it is my opinion that the veterinary surgeon, from his training and education, is at least more fitted to give an opinion as to its fitness or unfitness for human consumption, and also to recognise what pathological conditions and what diseases an animal may have suffered from before death which will render the flesh harmful, than the ordinary lay inspector of meat to whom the duties are now deputed—recruited, as they generally are, from superannuated police constables, indigent butchers, and in one case to my own knowledge a retired cobbler. Perhaps these officials are not alone to blame, as in their evidence in the Birkenhead case, one of them admits that the medical officers of health for Liverpool "only see meat when it is in our own depôt after being seized." Surely this is not what the public will consider an adequate supervision and inspection of the animal food supply to this city.

Again, one of the Liverpool inspectors says, "remove the diseased parts and I would eat it myself." As the germs of the disease in an animal so far advanced must have permeated all the flesh and tissues, this is truly an instance where 'tis folly to be wise, and I really think it is time the people of Liverpool should not for their own safety as consumers allow such blissful ignorance to continue.

The modes of procedure indicated by the newspaper report on Monday must, with practical men such as the butcher, bring the operation of inspection into ridicule, and render what ought to be a useful hygienic service a farce.—Yours, &c.,

WILLIAM J. WELSBY, M.R.C.V.S.

West Derby, Liverpool. Dec. 6th, 1893.

A Public Memorial to Quackery.

A hundred years ago, says a medical contemporary, John Hunter died in London, obscure enough in his burial at St. Martin's-in-the-Fields though illustrious for ever in the annals of surgery. Not until nearly seventy years later was he granted the tardy honour of burial in our national Abbey, and then only at the instance of another student of science. It is probable that we shall long continue to scan the thoroughfares in vain for memorials of him; but not, it would seem, for those of ignorant craftsmen assuming the outward signs of his calling. A metropolitan authority, if rumour may be trusted, has not forgotten to claim some share of public esteem for these latter, or, at all events, for one of them, the late Mr. John Hutton, in whose honour the vestry of St. George's, Hanover Square, propose to erect a drinking fountain. It is hardly to be expected that the claims of the well-advertised "bone-setter" will commend themselves to the judgment of the County Council. For the credit of public opinion it is to be hoped that they will not. The proposed commemoration would, in fact, constitute an open recommendation of quackery. To perpetuate the name of the apostles of "bone-setting" is to insult the skill of a far more carefully trained experience and to stultify the very sanctions of professional registration. We sincerely trust, therefore—and that from no mere narrow spirit of jealousy,—that the project in question will be suffered to die in embryo.

A Compensation Difficulty.

A curious difficulty arose at a meeting of the Isle of Ely County Council yesterday. The veterinary inspector had ordered the slaughter of a horse which had been attacked with glanders. The owner claimed compensation, but it was reported that when the animal was brought out to be shot, the gun missed fire. The horse, however, immediately afterwards dropped down dead. As the destruction of the horse had been ordered by the inspector, and as the owner had done all in his power to prevent the spread of infection by calling in the inspector, there was a disposition to pay the compensation; but the question arose whether the gun having missed fire they could legally do so. In the end the matter was referred to a committee to endeavour to solve the difficulty.

Canadian Cattle Disease.

Mr. Adami, professor of pathology at the M'Gill University, Montreal, and late Fellow of Jesus College, Cambridge, and Dr. M'Eachern, the Dominion Government Veterinary Inspector, have made a microscopic examination of the lungs of an animal landed from the steamer Hurona and slaughtered at Deptford, which was alleged to have been affected with pleuro-pneumonia. They have sent separate reports to the Government upon the result of their examination, and both agree that the diagnosis of the Imperial veterinary authorities was based upon serious error, and that the condemned animals were not suffering from pleuro-pneumonia.—*The Standard.*

Prescribing Chemists.

The Provincial Medical Journal of November 1st publishes the following advertisement, under the heading "The British and Colonial Druggist Series":—"Minor Ailments, crown 8vo, cloth, 5s. Comprehensive directions for treatment by the most modern methods of the ailments daily submitted to chemists. Edited by an experienced medical practitioner." We venture to express surprise that a medical man should be found to facilitate a false practice by chemists, contrary alike to the public interest and to the interests of the profession. No wonder that chemists prescribe when they are so helped, and when a "medical" journal gives prominence to such books.—*The Lancet.*

Paracelsus.

Paracelsus was body-physician to Archbishop Ernest of Salzburg, Austria, and died (it is supposed, by a murderer's hand) in the residential city of that prelate on September 23, 1531. His monument may be seen in the Church of St. Sebastian, in Salzburg. Much of the career of Paracelsus is wrapt in obscurity; but it would seem that his father, a native of Suabia, was a physicion by profession, and that Paracelsus himself, after many years of wandering life, was engaged from 1526 to 1529 as city physician and professor of Medicine in Basel. He left there in consequence of quarrels with his colleagues, and again began to roam over Europe, practising his profession and effecting many cures, the fame of which preceded him everywhere. Finally, he drifted into Salzburg, where he remained until his death. Judging by the skeleton still preserved in Salzburg, Paracelsus was almost a dwarf, his height being barely 4 feet. Contemporary writers picture him as a weak-voiced, child-faced mannikin. Paracelsus was the first to introduce chemical preparations into pharmacy, and the author of the saying—naturally looked upon as heretical in those days—that the true use of chemistry was not to prepare gold, but medicinal remedies. Until Paracelsus used them, mercurial and lead preparations, salts of antimony, milk of sulphur, sulphate of copper, and iron-combinations had not been employed in medicine, and the philosopher's demonstration that even the most virulent poisons might sometimes prove valuable remedial agents was the foundation of modern pharmacotherapy.—*The Chemist and Druggist.*

CORRESPONDENCE.

PROPOSED TESTIMONIAL TO PROFESSOR AXE

LONDON,
December, 1893.

DEAR SIR,

At an influentially attended meeting recently held at the Royal College of Veterinary Surgeons under the Presidency of Mr. F. W. Wragg, P.R.C.V.S., it was unanimously resolved that a Committee be formed for the purpose of raising a fund in order to present Professor Axe with a suitable Testimonial (subscriptions to which will be restricted to Members R.C.V.S.) in recognition of the many valuable services rendered by him to the Veterinary Profession.

Professor Axe's services are so well known to the profession that we feel it to be unnecessary to recapitulate them in detail; we may, however, be permitted to notice that until recently, he had for 25 years occupied a prominent position as a Teacher at the Royal Veterinary College, Camden Town; that for many years he served as a Member of Council R.C.V.S., and in the course of the years 1889-90 filled the office of President.

Professor Axe has, moreover, conducted a large number of scientific investigations, among which may be specially noted his work in the alleged connection between scarlet fever and the udder diseases of cows; he has also been a frequent contributor to scientific literature and to the proceedings of numerous Veterinary Medical Associations throughout the country.

On these grounds, we feel fully justified in soliciting your co-operation in recognition of his services to the profession.

Mr. J. F. Simpson, F.R.C.V.S., Maidenhead, has kindly consented to act as Treasurer to the fund, and subscriptions, which are not to exceed Two Guineas, will be gladly received and acknowledged by him, and the progress of the fund will be noted from time to time in the Veterinary Periodicals.

The Hon. Secretary, Mr. R. A. Powys, Royal Veterinary College, Camden Town, will also have much pleasure in receiving and acknowledging subscriptions.

We are, dear Sir, yours very faithfully,

F. W. WRAGG, P.R.C.V.S., *Chairman of Committee.*
RICHARD A. N. POWYS, *Hon. Secretary.*

COMMUNICATIONS, BOOKS, AND PAPERS RECEIVED:—Messrs. B. Freer, W. S. Johnson, T. M. McConnell, A. Renfiew, "Journal of Comp. Med. and Vety. Arch." (New York, Dec.) "The Liverpool Courier," "The Madras Times," "The Times of India," "The Scotsman," "The Advocate" (Bâton Rouge, Louisiana).

We shall be obliged by early intelligence of all matters worth bringing under the notice of the profession, and thankful to any friends who may send us cuttings from local papers, containing facts of interest.

Original articles and reports should be written on one side only of the paper, and authenticated by the names and addresses of the writers, not necessarily for publication.